Transportation Revenue and Autonomous Vehicles

UO School of Planning, Public Policy and Management
Public Budget Administration

Kerry Edinger
Rebecca Lewis, PhD, Instructor
Public Budget Administration

• 26 Master of Public Administration second year students
• Three Portland, two Tualatin, and two Tigard groups
• Three reports and a final presentation
Sustainable City Year Program project goal

• Cities are researching policy options to accommodate new transportation technologies

• Two research questions:
  • How will autonomous vehicles (AVs) impact transportation revenues in Tigard, Tualatin, and Portland?
  • What could replace lost revenue caused by AVs?
Project assumptions

• 50% of cars will be connected autonomous vehicles
• 100% of AVs will be electric vehicles
• 85% of AVs will be shared; 15% privately owned
How will autonomous vehicles impact transportation revenues in the Portland region?

Tigard, Tualatin, Portland
Autonomous vehicles: Changing cities

Potential benefits
• Improving safety
• Increasing mobility
• Increasing road capacity
• Lowering emissions

Potential challenges
• Street design
• Parking planning
• Operating transit
• Land zoning
• Declining revenue

Fagnant and Kockelman, 2015
Autonomous vehicles: Changing cities

Potential benefits
• Improving safety
• Increasing mobility
• Increasing road capacity
• Lowering emissions

Potential challenges
• Street design
• Parking planning
• Operating transit
• Land zoning
• Declining revenue

Fagnant and Kockelman, 2015
Expected Fiscal Impacts of AVs

Reductions:

• Gasoline taxes
• Vehicle registration
• Traffic and parking citations
• Vehicle impound fees
• Parking revenue
Projected decline in transportation revenue

15 - 50%
What could replace lost revenue caused by autonomous vehicles?
AV Revenue Opportunities

- Vehicle miles traveled (VMT) fees
- Cordon (congestion) pricing
- On/off ramp fees
AV Revenue Opportunities (new)

- Pick up and drop off zones
  - Assessed annual fees or geofencing
- Empty seat tax
- Fleet parking fees
- Use of curb access
AV Revenue Opportunities (new)

- GPS and data fees
- Mobile business tax
- Electricity fees
- Charging stations
- Advertisement tax
Summary of AV Revenue Policy Options

- Vehicle miles traveled (VMT) fees
- Cordon (congestion) pricing
- On/off ramp fees
- Pick up and drop off zones
  - Assessed annual fees or geofencing
- Empty seat tax
- Fleet parking fees
- Use of curb access
- GPS and data fees
- Mobile business tax
- Electricity fees
- Charging stations
- Advertisement tax

Kerry Edinger @ gmail.com
With contributions by Rebecca Lewis, Nico Larco, and UO MPA class of 2018